Instruction for use

STARBoard, STARSupport and STARTable for Trans-radial Angiography and Revascularisation procedures

StarBoard and StarTable for right arm support

This guide describes the correct set-up and use of Adept Medical's STARBoard, a system that facilitates trans-radial catheterisation procedures.

The components that make up the **STARSystem** are The **STARBoard**, the **STARSupport** (Left Arm Support) and the **STARTable**.

The system provides support and optimal positioning of the patients right or left arm (depending on which arm is being used for access) during trans-radial angiography and revascularisation procedures. These procedures are carried out by Interventional Cardiologists or Interventional Radiologists.

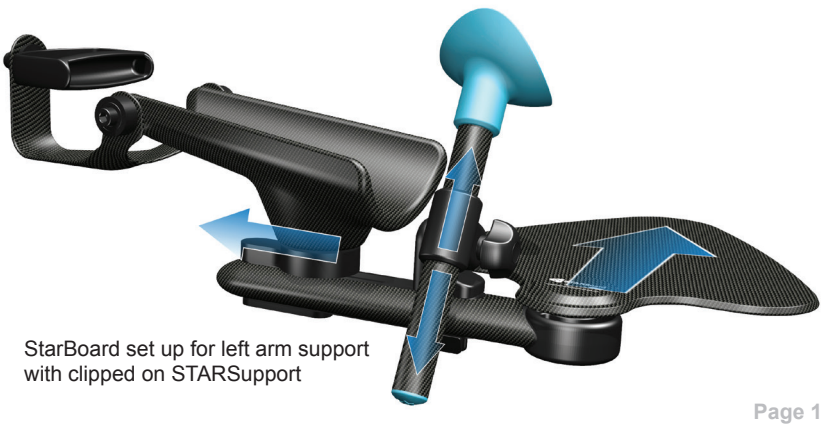
The Left Arm Support is used only for left arm procedures. It clips onto the STARBoard after radial artery access has been achieved and supports the upper left arm, presenting the wrist in an elevated position across the abdomen of the patient which allows the clinician to continue working comfortably from the right side of the table.

The STARTable provides a stable work surface and support for catheters, wires and other equipment as well as additional x-ray scatter reduction.

For more information please turn to Page 8 or visit:
www.adeptmedical.co.nz/pages/starsystem

StarBoard for right arm support

StarTable



StarBoard set up for left arm support with clipped on STARSupport

STARSystem – Support for Trans-radial Angiography and Revascularisation

Before use

Ensure that the product is clean and that it is not damaged.

Check all 4 of the Starboards' pivoting joints (Figure 1). They should pivot with the application of reasonable force.

They should not be loose. If any of these joints are found to be loose please refer to the maintenance section of this guide on page 8.

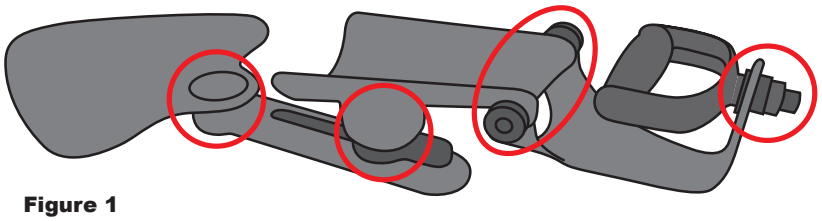


Figure 1

Using the STARBoard to access the left or right radial artery positioning the STARBoard:

1. With the patient lying on the table, align the centre of the dagger board just below the shoulder joint as illustrated in Figure 2.

While slightly lifting the patient, slide the dagger board between the mattress and the x-ray table until only the pivot is visible. The weight of the patient on the mattress will support the STARBoard. (See Figures 2, 3 and 4)

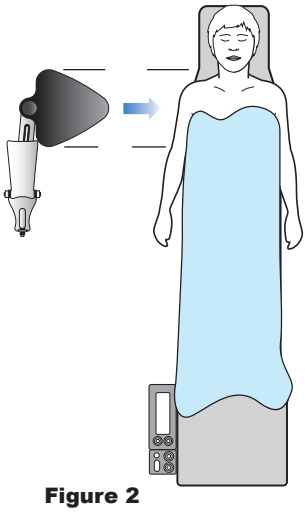


Figure 2

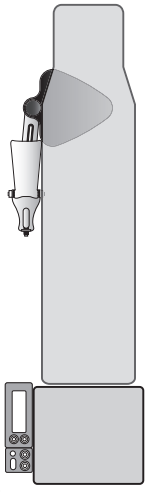


Figure 3

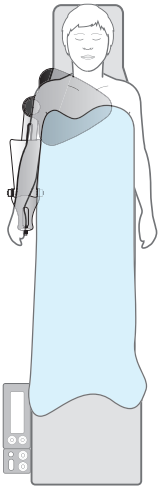
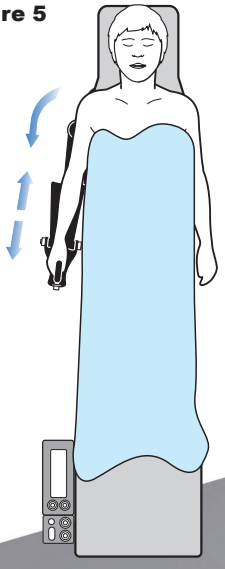


Figure 4

2. Place the patients arm into the forearm support while adjusting to suit arm length as described in Figure 5.

Figure 5



3. Add some absorbent padding under the arm if desired.

4. Have the patient grip the handle in the vertical position as shown in Figure 6, and adjust the pivots so that the patients arm is relaxed and supported (Figure 7).

Figure 6

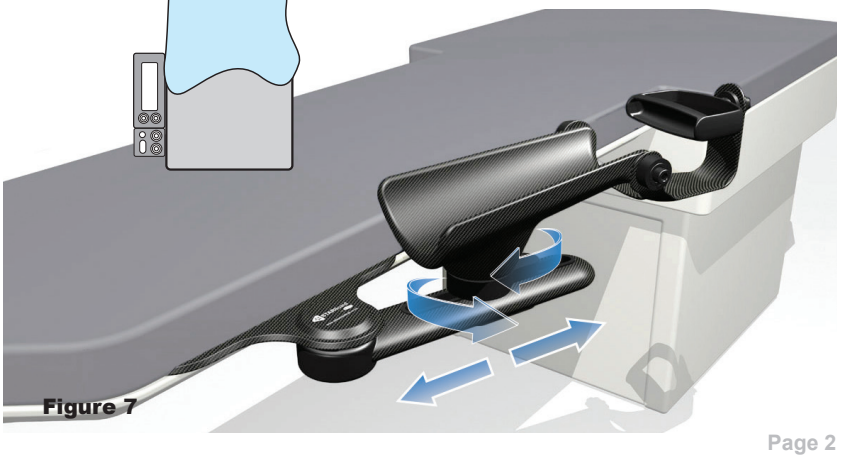


Figure 7

STARSystem – Support for Trans-radial Angiography and Revascularisation

5. Placement of the STARTable: Align the shelf so that the arrow is approximately in line with the patient's knee. The arrow should be on the lower section pointing towards the patient as illustrated in Figure 8a.

Slide the lower section of the shelf between the mattress and the x-ray table until it comes to rest against the vertical face (Figures 8b and 9a). The weight of the patient on the mattress will support the shelf.

The vertical wall will sit between the patients arm and the x-ray table as shown in Figure 10.
The overhanging portion of the vertical wall allows for the STARTable to be positioned as far towards the patient's feet (and possibly over the controls) as is necessary.

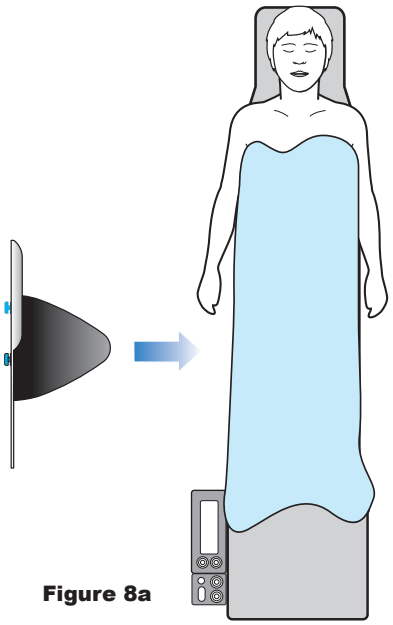


Figure 8a

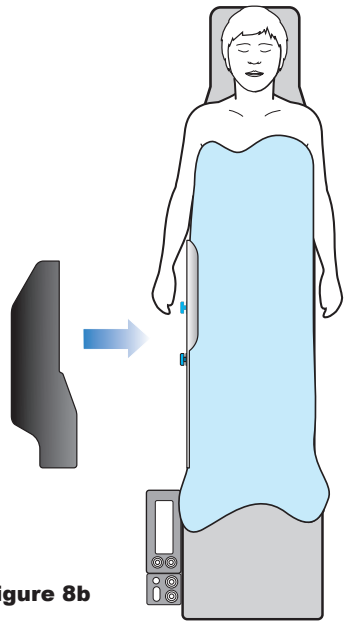


Figure 8b

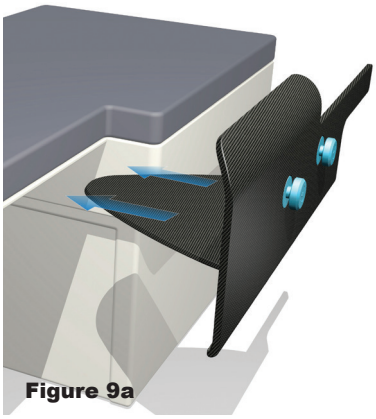


Figure 9a

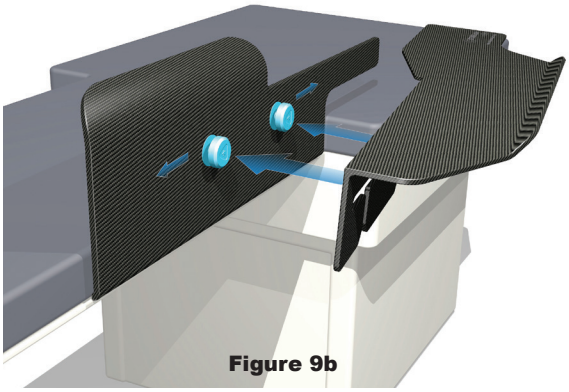


Figure 9b

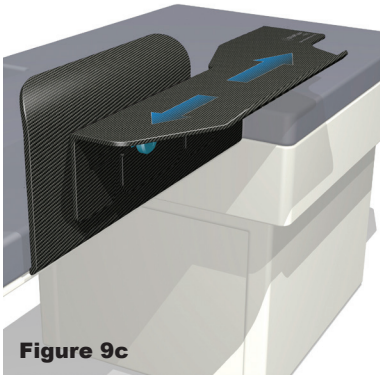


Figure 9c

6. Attach the shelf to the STARTable by locating the slot features over the blue coloured spigots on the vertical wall and slide down until the shelf comes to rest. (Figures 8b, 9b and 9c)

7. At this point the STARBoard can be installed if it has not been already. Note: The STARTable can be installed prior to the STARBoard if desired.

8. Once the patients arm and wrist is positioned in the STARBoard as desired, the shelf can be adjusted as necessary by sliding it along the blue spigots as illustrated in Figure 9c.

9. Note. The drapes will eventually cover the STARTable. The shelf can still be adjusted beneath the drape as required.

Figure 10

STARSystem – Support for Trans-radial Angiography and Revascularisation

10. If the patient is restless or uncooperative, secure the forearm by taping it to the forearm support on the STARBoard as illustrated in Figure 11a.

11. Rotate the handle as shown in Figure 11a so the patients palm is facing upwards (Figure 11b).

At this point it is very easy to test that the hand and wrist are in a suitable position for comfortable hyperextension or adjust if required.

12. Paint the skin with antiseptic solution and drape the patient as per clinical protocol (Figure 13).

13. Complete other patient preparation as per hospital/clinic protocol.

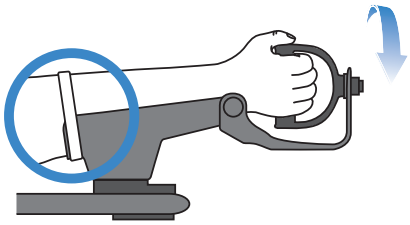


Figure 11a

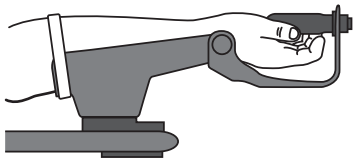


Figure 11b

Figure 12

Figure 13

Positioning for Vascular Access:

14. With the palm still facing up, the arm should be positioned comfortably and slightly rotated away from the patient's body (Figures 12 and 14).

15. Hyperextend the wrist by pivoting the hand grip downwards as illustrated in Figure 15b. This can be done before or after draping. For clarity, this is shown here without the drape.

16. Locate the radial artery and infiltrate the subcutaneous tissue with local anaesthetic.

17. Access the radial artery and position the vascular sheath as per hospital/clinic protocol (Figure 15c).

Figure 14

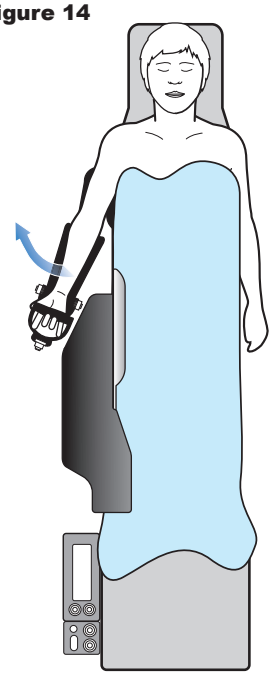


Figure 15a

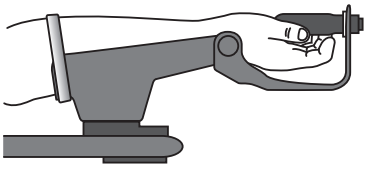


Figure 15b

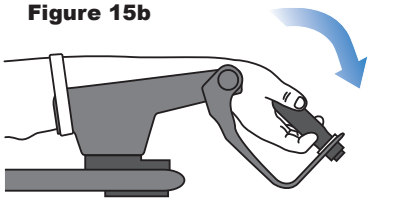
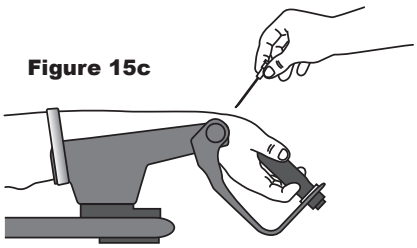


Figure 15c



STARSystem – Support for Trans-radial Angiography and Revascularisation

Positioning for Angiography/Intervention:

18. Once access is gained and the sheath is in place flex the wrist to retract the hyperextension (Figure 16a).

19. Medially rotate the wrist approximately 60 degrees so that the thumb is facing up with the palm towards the patient (Figure 16b and 16c).

20. Leaving the hand and wrist in this position, rotate the arm back towards the patient so that the forearm is now adjacent to the patient's side (Figures 17 and 18).

Figure 18

21. The rest of the procedure can now be performed as per hospital / clinic protocol.

Figure 19

22. At the end of the procedure rotate the patients hand so that inner aspect of the wrist is facing up and remove the drapes.

23. Remove patients hand from the hand grip.

24. Remove the sheath as per hospital/clinic protocol, and apply radial artery occlusion band.

The STARBoard and shelf can now be removed.

Figure 16a

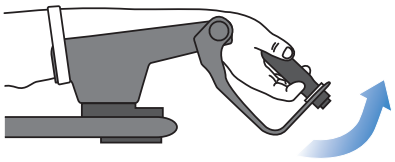


Figure 16b

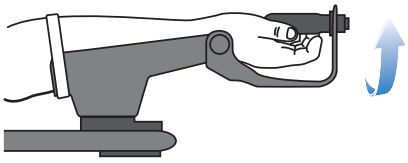


Figure 16c

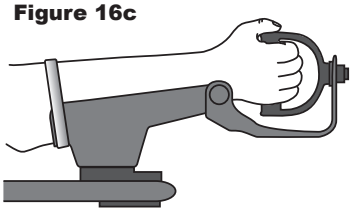


Figure 17

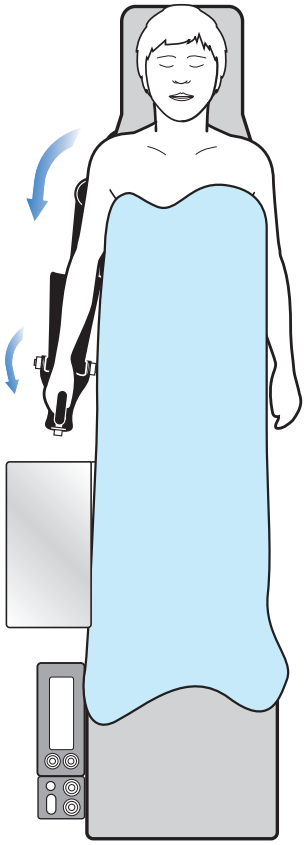


Figure 20

STARSystem – Support for Trans-radial Angiography and Revascularisation

The STARSupport for Left Arm Procedures

25. For left arm procedures the STARBoard is set-up in the same way as for right arm procedures. Follow steps 1-4 and 10-20 from the left hand side. (Figure 21)

26. Once access to the left radial artery has been gained and the sheath is in place, the patients hand can be released from the STAR-Board handgrip.

27. Gather the drape around the wrist and forearm while lifting the arm out of the forearm support. The patient's arm is then moved with the drape and positioned across the patient's lower abdomen. Examples of this position are shown without the drape for clarity in Figures 22 and 23.

28. Rotate the STARBoard arm so it sits in against the patient's side and advance the slide fully in a caudal direction as illustrated in Figure 24.

29. Install the STARSupport into the slot on the main arm of the STARBoard as shown in Figure 24.

Make sure the knob is towards the head of the patient. The STARSupport should click firmly into place. The graphic on the blue, soft touch, arm support indicates its correct orientation. The arrow should point towards the patient as shown below.

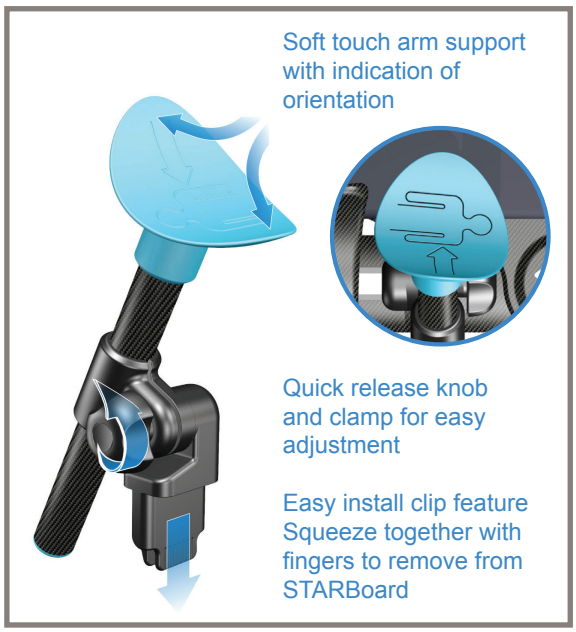

Soft touch arm support with indication of orientation
Quick release knob and clamp for easy adjustment
Easy install clip feature Squeeze together with fingers to remove from STARBoard

Figure 21

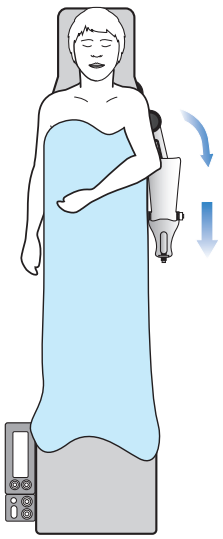


Figure 22

Figure 23

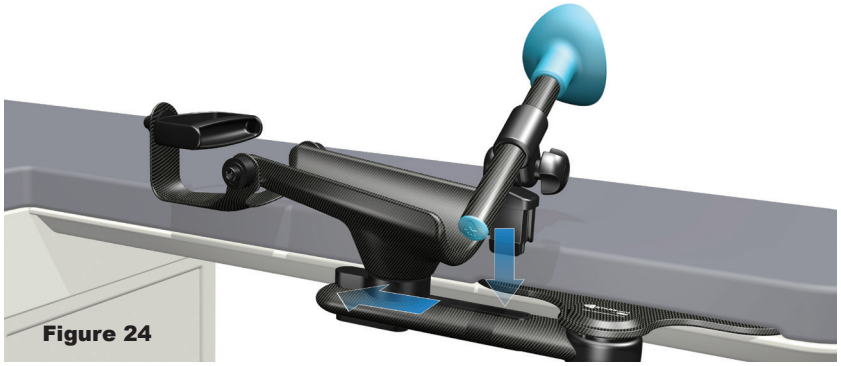


Figure 24

STARSystem – Support for Trans-radial Angiography and Revascularisation

The STARSupport for Left Arm Procedures

30. Once installed, the STARSupport should be adjusted to suit the patient and achieve the desired procedural position. Loosen the knob (if it is not already) and adjust the angle and length as illustrated in Figure 26. The blue soft touch arm support should cup the arm just above the elbow.

31. The patient's elbow should be elevated as high as is comfortable so that the forearm is approximately horizontal when the wrist is resting on the lower abdomen. This prevents the arm straightening out or slipping back to the left side. Once the desired position is achieved, tighten the knob firmly to fix the location.
If desired, another drape can now be placed across the sterile field around the left shoulder area.

The clinician can now return to right hand side of the patient to perform the angiography or interventional procedure.

32. At the completion of the procedure, loosen the knob to release the patients arm from the STARSupport. Once the patients arm is clear retighten the knob to secure the adjustable section of the STARSupport.

33. To release the STARSupport from the slot in the STARBoard, squeeze the clip feature together as indicated in Figure 29, while lifting the STARSupport out of the slot. This can be done before or after the STARBoard is removed from the table.

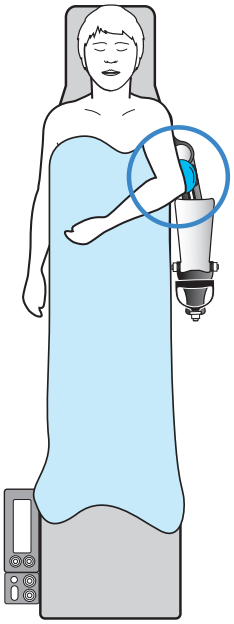


Figure 25

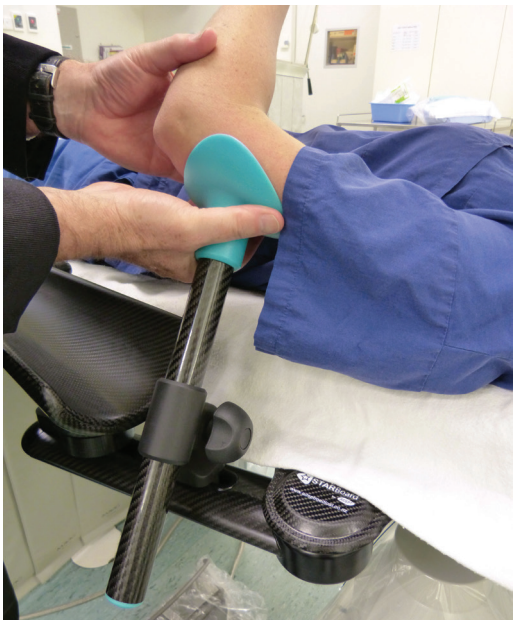


Figure 26

Figure 27

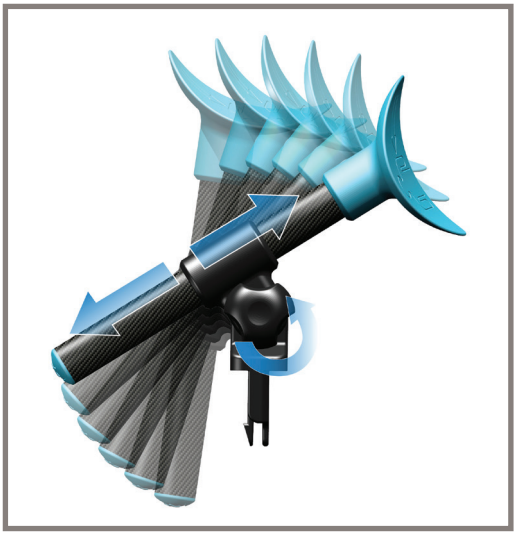


Figure 28

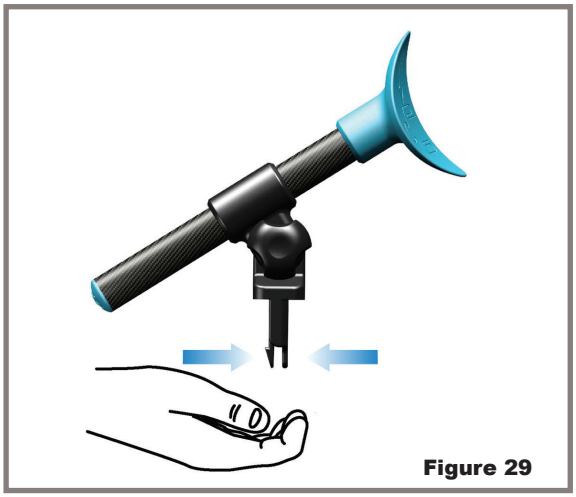


Figure 29

Figure 30

STARSystem – Support for Trans-radial Angiography and Revascularisation

Cleaning

The STARBoard, STARSupport and STARTable can be cleaned as per your standard hospital/ clinical protocol for similar apparatus. It should be sprayed and/or wiped down with a suitable cleaning agent. If desired, the STARBoard can be placed inside a clean plastic bag during procedures to help protect it further. (Figures 31 & 32)
Do not use Disinfectant Cleaner Virex Tb by Diversey with the STARSystem as it may cause damage to some components over prolonged use. See website for approved cleaners.
Do not Autoclave!

Figure 31

Figure 32

Maintenance

Periodically the joints shown in the image below may require tightening to maintain optimal performance of the friction joints (Figure 33). Ideally these should be loose enough to move when reasonable force is applied but tight enough to hold their position.

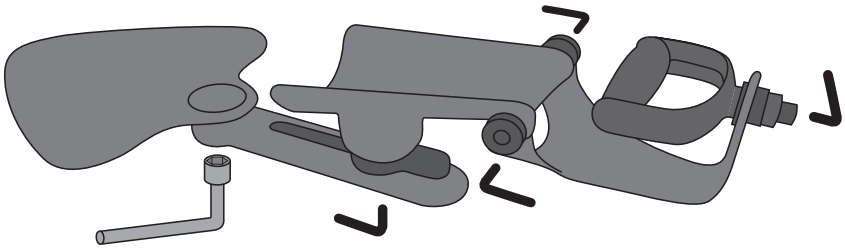


Figure 33

The tools required: For the main joint to the board – 18mm Hex Socket.
For all other joints – M10 Allen Key

Warnings
Hypersensitivity. Ensure patient has no allergic reactions to Epoxy Resin
Be careful not to entrap fingers

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